

What Is Claimed Is:

1. A communication system provided with a network and one or more communication devices each communicating with the network and other communication devices or any of them, wherein:

the network has wireless access points for use in connection to the communication devices,

each of the plurality of communication devices has:

communication device notifying means for notifying each of the communication devices, which are informed of an identifier, of communication devices with which it can communicate,

communication path-searching means for searching for a communication path to and from communication devices with which the particular communication device can communicate on the basis of the notified communication devices, and

communicating means for carrying out, on the basis of the communication path acquired as a result of the search, communication with the network via the wireless access points and/or communication with another communication device.

2. A communication device for communication by one communication device with other communication devices wherein each of the plurality of communication devices has:

communication device notifying means for notifying each of the communication devices, which are informed of an identifier, of communication devices with which the particular communication device can communicate,

communication path-searching means for searching for a

communication path to and from communication devices with which the particular communication device can communicate on the basis of the notified communication devices, and

communicating means for carrying out, on the basis of the communication path acquired as a result of the search, communication with another communication device.

3. The communication device according to Claim 2, wherein one or more of the plurality of communication devices are vehicle-mountable wireless access points.

4. The communication device according to Claim 3, wherein the communication path-searching means search for a communication path which, as the communication path, links the communication device with which the first mentioned communication device can communicate and the particular communication device via the communication device.

5. The communication device according to Claim 3, wherein the communication path-searching means search for a communication path which, as the communication path, minimizes the number of the communication devices between the communication device with which the first mentioned communication device can communicate and the particular communication device.

6. The communication device according to Claim 3, wherein each of the communication devices bears an intrinsic identifier, and

each of the plurality of communication devices further has identifier informing means for informing each of the other

communication devices of its own identifier,

the communication device notifying means notify the identifier of the particular communication device and the identifiers of the communication devices with which it can communicate to each of the communication devices informed of the identifier,

the communication path-searching means search, on the basis of the informed identifier, for a communication path between the communication devices with which the particular communication device can communicate and itself,

the communicating means have receiver means for receiving from the other communication devices communication data including the identifiers of the communication devices which are their communication partners, communication data processing means for processing the received communication data if the identifier contained in the received communication data is the identifier of the particular communication device, and communication data interconnecting means for interconnecting, on the basis of the communication path, the received communication data to the communication device which is the communication partner or to a communication device intervening between the communication partner and the particular communication device if the identifier contained in the received communication data is not the identifier of the particular communication device.

7. The communication device according to any of Claims 2 through 6, wherein the notification of the communication

devices with which the particular communication device can communicate and the search for the communication path are repeated at prescribed intervals of time.

8. A communication method for carrying out communication between one communication device and other communication devices, whereby each of the communication devices notifies each of the other communication devices, which are informed of an identifier, of communication devices with which it can communicate, a communication path between the communication devices with which the particular communication device can communicate with and itself is searched for on the basis of the notified communication devices, and communication is carried out, on the basis of the communication path acquired as a result of the search, with the other communication devices.

9. A program for carrying out communication between one communication device and other communication devices by causing a computer to execute, in each of the communication devices:

a step of notifying each of the communication devices, which are informed of an identifier, of communication devices with which the particular communication device can communicate,

a step of searching for a communication path to and from communication devices with which the particular communication device can communicate on the basis of the notified communication devices, and

a step of carrying out communication, on the basis of the communication path acquired as a result of the search, with the other communication devices.

10. An information collecting system connected to one or more mobile object communication devices via the mobile object communication device and a network and having an information collecting apparatus for collecting information from each of the mobile object communication devices, wherein:

the information collecting apparatus has communication path-searching means for a communication path between the mobile object communication devices, and information collecting means for collecting from each of the mobile object communication devices by use of the searched-for communication path.

11. The information collecting system according to Claim 1, wherein one or more of the mobile object communication devices are vehicle-mountable communication devices.

12. The information collecting system according to Claim 1 or 2, wherein the mobile object communication devices are provided with wireless access points and the mobile object communication devices are connected to the information collecting apparatus via the wireless access points.

13. The information collecting system according to Claims 1 through 3, wherein each of the mobile object communication devices has wireless communicating means for communicating with the wireless access points or the other mobile object communication devices by wireless communication, and interconnecting/communicating means for interconnecting communication between the other mobile object communication devices and the wireless access points.

14. The information collecting system according to Claim

4, wherein each of the mobile object communication devices further has communication path-searching means for search for a communication path to and from each of the other mobile object communication devices.

15. An information collecting apparatus for collecting information from one or more communication nodes, provided with communication path-searching means for searching a communication path between the communication nodes and information collecting means for collecting information from each of the communication nodes by use of the searched-for communication path.

16. The information collecting apparatus according to Claim 6, wherein the communication path-searching means search for a communication path which, as the communication path, links the communication nodes with which a given node can communicate with the particular node via the communication nodes.

17. The information collecting apparatus according to Claim 7, wherein the communication path-searching means search for a communication path which, as the communication path, minimizes the number of the communication nodes between the communication device with which a given communication node can communicate and the particular communication node.

18. The information collecting apparatus according to any of Claims 6 through 8, wherein the information collecting apparatus and each of the communication nodes respectively bear intrinsic identifiers, the information collecting apparatus further has identifier informing means for informing each of

the other communication nodes of its own identifier, and each of the communication nodes notifies communication nodes with which it can communicate to the information collecting apparatus or any of the communication nodes informed of the identifier, searches for a communication path, on the basis of the notified communication nodes, between the communication nodes with which it can communicate and itself, and carries out communication with the other communication devices on the basis of the communication path acquired as a result of the search.

19. The information collecting apparatus according to Claim 9, wherein each of the communication nodes informs its own identifier and the identifiers of the communication nodes with which it can communicate to the information collecting apparatus or each of the communication nodes informed of the identifier, and the communication path-searching means search for a communication path between the communication nodes with which it can communicate and itself on the basis of the informed identifier.

20. The communication device according to Claim 10, wherein any of the communication nodes interconnects, on the basis of the communication path, received communication data to the information collecting apparatus that is its communication partner or to a communication node intervening between the information collecting apparatus, which is the communication partner, and the particular communication node if the identifier contained in the received communication data is not the identifier of the particular communication node.

21. An information collecting method for collecting information from each of one or more communication nodes, whereby a communication path between the communication nodes is searched for and, by use of the searched-for communication path, information is collected from each of the communication nodes.

22. A program for collecting information from each of one or more communication nodes for causing a computer to execute a step of searching for a communication path between the communication nodes and a step of collecting information from each of the communication nodes by use of the searched-for communication path.